

CROSS-REFERENCE

PN - JP2003010638 A 20030114
 TI - PLASMA WASTE GAS TREATMENT METHOD, WASTE GAS TREATMENT TOWER USING THE SAME METHOD, AND WASTE GAS TREATMENT APPARATUS COMPRISING THE SAME TOWER
 AB - PROBLEM TO BE SOLVED: To develop a waste gas treatment tower of a waste gas treatment apparatus capable of not only thermally decomposing CF₄ but also reliably thermally decomposing any semiconductor waste gas generated in semiconductor fabrication processes and a waste gas treatment apparatus comprising the waste gas treatment tower. SOLUTION: Plasma is generated between electrodes (4), (7) and a waste gas (F) is supplied together with at least one of oxygen or water to the plasma space to decompose the waste gas (F).
 FI - B01D53/34+ZAB; B01D53/34&120A; B01D53/34&134E; B01J19/08&E; H01L21/205; H05H1/42
 PA - KANKEN TECHNO CO LTD
 IN - IMAMURA KEIJI
 AP - JP20010199426 20010629
 PR - JP20010199426 20010629
 DT - I

ADVANTAGE

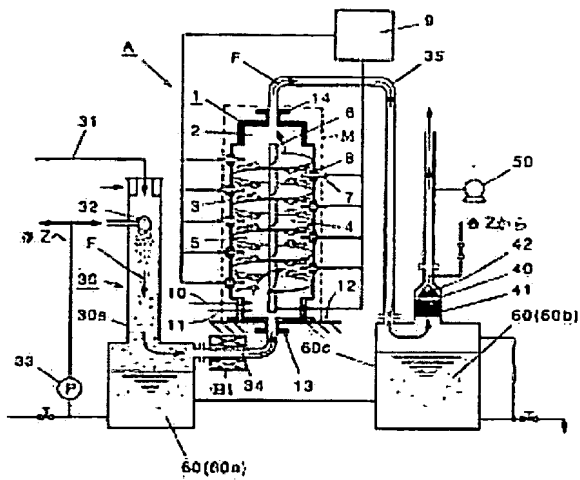
AN - 2003-319051 [31]
 TI - Plasma processing of waste gas ejected during cleaning and etching process in semiconductor manufacture, involves decomposing waste gas by supplying waste gas and oxygen and/or water, to plasma space formed between electrodes
 AB - JP2003010638 NOVELTY - The plasma waste-gas processing method involves forming a plasma between electrodes (7), supplying waste gas and oxygen and/or water to plasma space, and decomposing the waste gas.
 - DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
 - (1) waste-gas discharge treatment tower; and
 - (2) waste-gas processing apparatus equipped with treatment tower.
 - USE - For processing of waste gas ejected during cleaning and etching process in manufacture of electronic-circuit components, such as semiconductor and liquid crystal.
 - ADVANTAGE - As the plasma formed between the electrodes spreads like a sheet on the whole surface and forms a plasma space, the waste gas is decomposed effectively. Decomposition process performed by the high heat of plasma in the presence of oxygen and/or water, has high efficiency and irreversible target. Waste-gas component like tetrafluoromethane which is hard to decompose is also decomposed efficiently and irreversibly. The inner side of the decomposing chamber of the treatment tower is maintained in a pure state as the tower withstands adhesion of dust formed by decomposition due to high temperature plasma on the walls of the emission route. The processing apparatus using the treatment tower with the front and rear portion scrubber, processes the waste gas efficiently. The power consumption is less than the conventional apparatus, as the treatment apparatus uses an electrical heater.
 - DESCRIPTION OF DRAWING(S) - The figure shows the sectional drawing of the waste-gas treating apparatus.
 - Discharge electrode 7
 - (Dwg. 1/8)
 IW - PLASMA PROCESS WASTE GAS EJECT CLEAN ETCH PROCESS SEMICONDUCTOR MANUFACTURE DECOMPOSE WASTE GAS SUPPLY WASTE GAS OXYGEN WATER PLASMA SPACE FORMING ELECTRODE

PN - JP2003010638 A 20030114 DW200331 B01D53/70 008pp
 IC - B01D53/34 ; B01D53/46 ; B01D53/70 ; B01J19/08 ; H01L21/205 ; H05H1/42
 MC - L04-X
 - U11-C06A1B U11-C07A1 U11-C09C U11-C15Q V05-F04E V05-F05C V05-F05E5 V05-F08E
 DC - L03 U11 V05
 PA - (KANK-N) KANKEN TECHNO KK
 AP - JP20010199426 20010629
 PR - JP20010199426 20010629

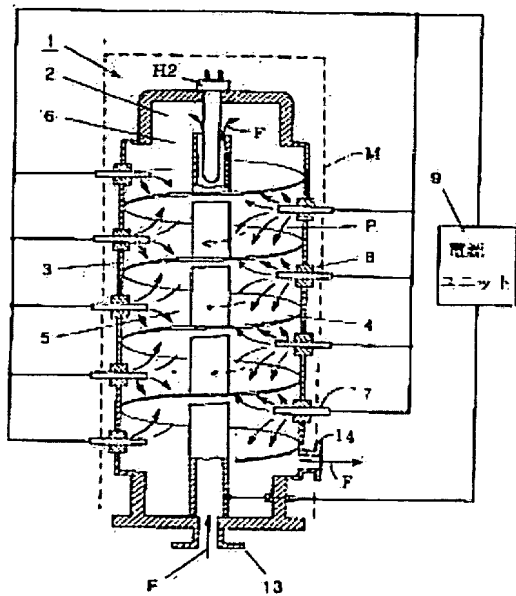
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PA - KANKEN TECHNO CO LTD
IN - IMAMURA KEIJI
ABD - 20030512
ABV - 200305
AP - JP20010199426 20010629

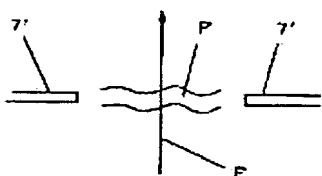
【図1】



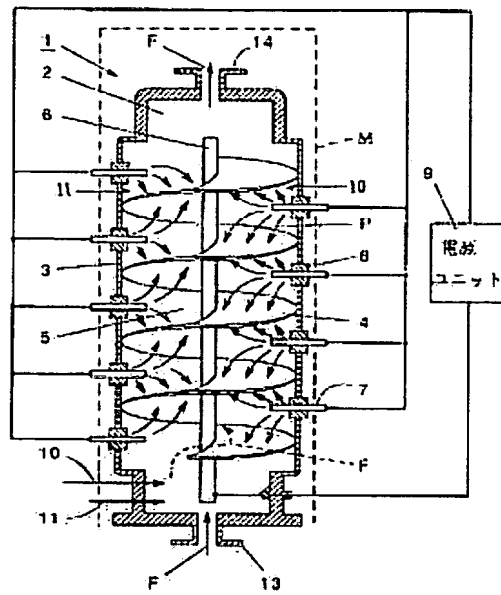
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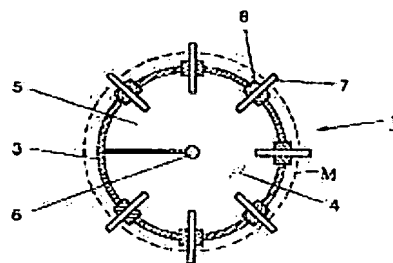
【図8】



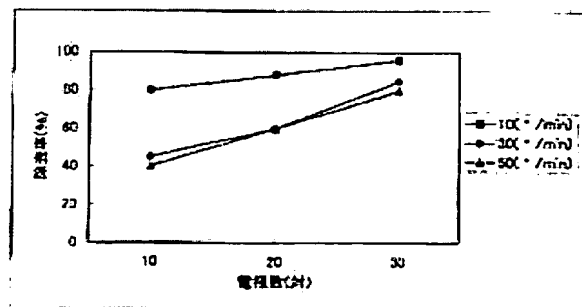
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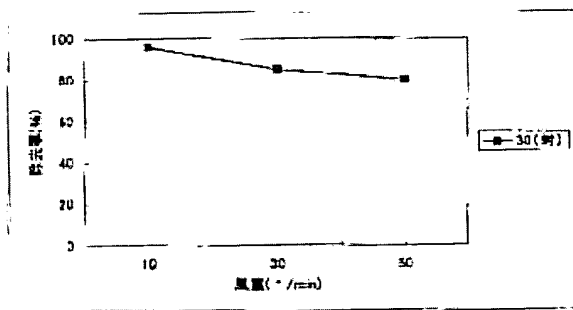
【図4】



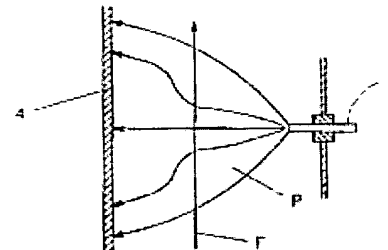
【図5】



【46】



【47】



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(51)Int. Cl.

H05H 1/12

識別記号

FI

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7-73-130A

120A

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 IG075 AA05 AA37 BA05 BA06 BD01
 BD07 CA02 CA15 CA17 CA51
 DA02 DA12 DA13 EA01 EC21
 EE50 EC09 EC21 FE02 FE03
 FE04 FC11 FC15
 GF015 DG08 BB11 EG07 EH01